

# FRAMINGHAM RADIO CLUB

PRESIDENT LEW NYMAN K1AZE\*\*\*\*V.P. JIM BOATES WA1UEH\*\*\*\*  
TREAS. HOWARD DAVIS WA1VFJ\*\*\*\*SECY. MIKE KELLER WA1KQH\*\*  
CLUB CALLSIGN W1FY\*\*\*CLUB RAGCHEW NET ON TUESDAY AT 9:00  
P.M. ON 28.625 MHZ, EXCEPT MEETING NIGHTS.\*\*EDITOR JIM\*\*  
BOATES WA1UEH. MEETINGS ON THE THIRD TUESDAY.\*\*\*

JUN. 1978

THE NEXT MEETING OF THE FRC WILL BE HELD ON JUNE 20TH AT THE CIVIC CENTER BUILDING, 21 CONCORD STREET, STARTING PROMPTLY AT 7:30 PM. THE ANNUAL ELECTION OF OFFICERS WILL BE HELD AT THIS MEETING. THE PROPOSED SLATE SELECTED BY THE NOMINATION COMMITTEE FOLLOWS: PRESIDENT, LEW NYMAN K1AZE, UNOPPOSED. VICE PRESIDENT, JIM BOATES WA1UEH, UNOPPOSED. TREASURER, HOWARD DAVIS WA1VFJ, UNOPPOSED. SECRETARY, RON EGALKA K1YHM AND MARK KELLER WB1AMY. NOMINATIONS FROM THE FLOOR ARE ALSO IN ORDER. THE BUSINESS MEETING AND ELECTION WILL BE KEPT BRIEF SO THAT WE MAY ADJOURN TO A LOCAL BISTRO FOR BEER AND PIZZA. SEE YOU AT THE MEETING.

THE FRC RECEIVED TREMENDOUS PUBLIC EXPOSURE AT THE ISRAELI DAY. HELD ON THE VILLAGE GREEN AT FRAMINGHAM CENTER. A LITTLE DIFFUCULTY WAS EXPERIENCED GETTING THE TRAFFIC INTO ISRAEL DUE TO THE AMOUNT OF TRAFFIC GIVEN TO THE ISRAELI HAMS AT THIS TIME. BUT, JON WEINER K1VVC, THANKS TO HIS RTTY-EQUIPMENT FINALLY PASSED THE MESSAGES. THE CLUB OWES A DEBT OF GRATITUDE TO JON. WE HAD A NICE LETTER FROM THE ISRAELI COMMITTEE THANKING US FOR OUR PARTICIPATION IN THE EVENT.

## \*\*\*\*\* WHAT YOU MISSED AT THE LAST MEETING\*\*\*\*\*

TWO OF THE RAFFLE PRIZES GIVEN AT THE FLEA MARKET WERE DONATED BY JULIE HOFFER W1DL. THE ATTACHE CASE WITH THE PADDED INTERIOR, JUST RIGHT, FOR A 2 METER RIG AND THE STEREO HEADPHONES. A BELATED THANKS JULIE.

A DISCUSSION WAS HELD ON THE MERITS OF HOLDING ANOTHER FLEA MARKET, SOMETIME NEXT FALL. THE ASSEMBLED BODY SEEMED IN FAVOR OF THIS PROPOSITION, AND FURTHER ACTION WILL BE TAKEN BY YOUR OFFICERS DURING THE SUMMER SEASON AND A WORKING PLAN WILL BE PROPOSED AT THE SEPTEMBER MEETING. IT WAS ALSO SUGGESTED THAT WE CONTACT A CATERING TRUCK TO PARK NEAR THE DOOR AT THE NEXT FLEA MARKET TO ALLOW DEALERS AND BUYERS TO SEEK REFRESHMENT NEAR THE FLEA MARKET.

MAC WA1IGL LISTED THE KNOWN PARTICIPANTS WHO WILL BE OPERATING FIELD DAY. 80 METERS, PHONE AND CW. JIM WA1UEH BAND MASTER. BOB WB1FXR, EARL EDIGHOFFER K1QMD AND TED WB1ECE. 40 AND 10 METERS PHONE AND CW. MAC WA1IGL BAND MASTER. LEW K1AZE, AND JERRY K1AIU. 20 METERS PHONE AND CW. TONY WA1MTI BAND MASTER, HOWARD WA1VFJ. 15 METERS PHONE AND CW. MARK WB1AMY BAND MASTER AND COMPANY. JULIE W1DL FLOATING OPERATOR, ALL BANDS.

LEW K1AZE AND JIM WA1UEH WILL HAVE 2 METER RIGS WITH PHONE PATCH CAPABILITIES TO DEMONSTRATE TO THE RED CROSS AND TOWN OFFICIALS OUR ABILITY FOR IMMEDIATE EMERGENCY COMMUNICATINS. THERE ARE PLENTY OF OPENNINGS FOR MORE OPERATORS, LOGGERS AND GENERAL HELP. SO, COME ON DOWN. WE WILL BE OPERATING NEAR THE FRAMINHAM DOG POUND NEAR THE MACOMBER ESTATE.

MAC WA1IGL GAVE A REPORT ON THE MEETING OF NEW ENGLAND OFFICIALS AT ARRL HEADQUARTERS IN NEWINGTON. THE MEETING DEALT MOSTLY WITH TRAFFIC NET OPERATIONS AND EMERGENCY COMMUNICATIONS AND THE DESIREABILITY OF GETTING MORE HAMS INVOLVED IN THESE ACTIVITIES. MAC STATED, "MOST AMATEURS ARE PUBLIC SERVICE ORIENTED AND MORE THAN WILLING TO BECOME PART OF THE ACTION WITHOUT BEING CALLED UPON. BUT THIS CAN BE FRUSTRATING IF A FEW PROBLEMS ARE NOT CLEARED UP BEFORE THE SITUATION ACTUALLY EXISTS. ONE OF THE PROBLEMS IS THAT THE AVERAGE AMATEUR IS NOT NETWORK ORIENTED OR FAMILIAR WITH FORMAL TRAFFIC FORMATS. ANOTHER IS THOSE THAT ARE INVOLVED IN ORGANIZING THESE EMERGENCY COMMUNICATIONS DO NOT KNOW WHO YOU ARE OR WHAT YOUR CAPABILITIES ARE. A LOT OF PEOPLE DO NOT KNOW WHO THE EC FOR FRAMINGHAM AREA IS". MAC WA1IGL HOLDS THAT TITLE. MAC SUGGESTED THAT WE BE INTRODUCED TO FORMAL TRAFFIC HANDLING, TRAFFIC MESSAGES AND NET FORMALITIES. MAC WENT ON TO SUGGEST THAT THOSE WHO WISH TO LEARN THIS PHASE OF AMATEUR ACTIVITY CONTACT HIM AND LEARN THE ROPES BEFORE AN ACTUAL EMERGENCY SITUATION EXISTS.

THERE IS GOING TO BE A CLUB NET, SPONSORED BY THE ARRL, ON SUNDAY JUNE 11TH AT 15:00 EST ON 3.950 MHZ. SO CHECK IN AND LET THEM KNOW THAT THE FRC IS ALIVE AND WELL.

MAC ALSO GAVE A STATUS REPORT ON FAAREN. AT THIS WRITING IT IS NOT KNOWN IF WE CAN USE THE FRAMINGHAM REPEATER ASSN. MACHINE FOR EMERGENCY COMMUNICATIONS. THE REPEATER IS AT THIS TIME BEING MOVED TO A NEW LOCATION AND NEW TRUSTEES HAVE BEEN APPOINTED. WE ARE ALMOST POSITIVE THAT THE NEW TRUSTEES WILL GRANT US PERMISSION TO USE THE MACHINE FOR EMERGENCY COMMUNICATIONS. HOPEFULLY, WE WILL MEET WITH THEM SOON AND GAIN THEIR PERMISSION. ALSO UP IN THE AIR IS THE STATUS OF THE ROOM AND ANTENNAS THE TOWN IS SUPPOSED TO SUPPLY FOR OUR USE. MAC IS WORKING HARD ON THESE PROBLEMS AND SHOULD SOON BE RESOLVED. THE FIELD DAY OPERATION IN YOUR EDITORS OPINION WILL GO A LONG WAY IN CONVINCING THE POWERS THAT BE OF OUR EMERGENCY CAPABILITIES.

A PROPOSAL TO RAISE THE YEARLY DUES TO \$10.00 WAS APPROVED BY THE MEMBERS PRESENT. THE \$3.00 FEE IS NOW A RIDICULOUS SUM, DUE TO INFLATION. THE LAST TIME THAT THE DUES WERE RAISED WAS IN 1948. AS NEAR AS ANYBODY COULD REMEMBER. JIM WA1UEH DISCUSSED THE BASIS FOR RAISING THE DUES, WE HAVE 57 PAID UP MEMBERS AT THIS TIME WHICH GIVES US \$171.00 PER YEAR INCOME. THE YEARLY RENT FOR OUR MEETING ROOM IS \$96.00 PER YEAR, THE PRICE OF PRINTING THE FRAMINGHAM AND MAILING THEM TO THE MEMBERSHIP IS \$360.00 PER YEAR. THE ANNUAL DINNER COST THE CLUB \$78.00 THERE ARE MANY OTHER INCIDENTAL EXPENSES NOT LISTED. TAKING THESE FIGURES AND DIVIDING BY THE MEMBERSHIP GIVES A FIGURE OF \$9.36. SO INSTEAD OF EACH MEMBER COSTING THE CLUB \$7.26 PER YEAR, WE WILL BREAK APPROXIMATELY EVEN. INCIDENTLY NO MENTION WAS MADE OF THE SEVERAL BEER AND PIZZA PARTIES WE HAD LAST YEAR, AND THE CLUB SUPPLYS THE BEVERAGES AT OUR ANNUAL COOK-OUT. THE \$10.00 FIGURE BREAKS DOWN TO .50¢ PER MEETING. A MOTION WAS MADE BY JIM WA1UEH TO RAISE THE DUES TO REGULAR MEMBERS TO \$10.00 AND \$5.00 FOR BONA FIDE STUDENTS UP TO AND INCLUDING COLLEGE LEVEL, STARTING IN SEPTEMBER OF THIS YEAR. THE MOTION WAS SECONDED BY RON K1YHM. THE MOTION CARRIED BY A UNANIMOUS VOTE OF THE MEMBERS PRESENT.

ALSO UP FOR DISCUSSION WAS WHAT TO DO WITH THE FUNDS RAISED AT THE FLEA MARKET. A CLUB STATION, A PORTABLE GENERATOR OR A REPEATER FOR THE CLUB USE WERE SOME OF THE SUGGESTIONS BROUGHT FORWARD. IT WAS VOTED TO BANK THE MONEY UNTIL A MORE SUBSTANTIAL SUM WAS AVAILABLE. THEN WE CAN DISCUSS WHAT THE MEMBERS WANT THE MOST.

AFTER SEVERAL VOTES FOR A NEW NAME FOR THE NEWSLETTER, A NEW NAME WAS SELECTED. THE NEW NAME BEGINNING IN SEPTEMBER WILL BE THE framingHAM. JULIE W1DL IS THE WINNER OF THE PRIZE TO BE PRESENTED LATER, FOR THE SUGGESTION THAT WON THE MAJORITY OF THE VOTES. SEVERAL PEOPLE ARE WORKING ON DESIGNING A SUITABLE LOGO. THE MEMBERS WILL VOTE ON WHICH LOGO WE WILL USE. SO, IF YOU HAVE ANY IDEAS PLEASE SUBMIT THEM TO YOUR EDITOR.

ENZO WA1PYF WAS SELECTED TO PROCURE AN APPROPRIATE PLAQUE TO BE PRESENTED TO LEW K1AZE FOR HIS EXCELLANT PERFORMANCE AS PRESIDENT FOR THE FRC DURING THE 77-78 SEASON.

THE FOLLOWING MEMBERS HAVE GRATIOUSLY SUBMITTED THEIR NAMES TO THE HAM-AID SOCIETY. IF YOU HAVE ANY PARTICULAR PROBLEMS IN THEIR PARTICULAR FIELD OF EXPERTISE, PLEASE FEEL FREE TO CONTACT THEM.

ANTENNAS, LINEARS	JULIE HOFFER W1DL	872-5084
RTTY	JON WEINER K1VVC	877-7166
RTTY	RON EGALKA K1HYM	877-4520
NET CONTROL AND TRAFFIC HANDLING	JOHN MAC LEOD WA1IGL	877-2717
HAM ORIENTED LEGAL PROBLEMS	MARTY GREEN WA1WHU	877-1768
REPEATERS, PHONE PATCHES ETC.	GERRY CECCARINI K1AIU	620-0688
METEOROLOGY, WEATHER	ROLLIE BOUCHER K1OIS	653-2072

IF YOU HAVE ANY SPECIALTY AND WANT TO BECOME A MEMBER OF THE HAM-AID SOCIETY PLEASE CONTACT JIM WA1UEH AT 653-6398. THIS LIST WILL BE A MONTHLY ADDITION TO THE NEWSLETTER.

OUR CONGATULATIONS TO ROLLIE BOUCHER K1OIS ON HIS RECENT UPGRADING TO GENERAL. KEEP UP THE GOOD WORK ROLLIE, THERE IS PLENTY OF ROOM ON THE EXTRA BANDS.

AT THE END OF 1977, THERE WERE 12,200,000 CB LICENSEES, MORE THAN 4,500,000 THAN THERE WERE AT THE END OF 1976. THE POLITICAL CLOUT IN THIS NUMBER OF CHARLIE BROWNS IS SORT OF SCARY, ISN'T IT.

LISTEN FOR MORE KIDDIE-TALKIES ON THE AIR THIS CHRISTMAS. THE FCC HAS EXTENDED THE SALES CUTOFF DATE FOR 27-MHZ BAND, PART 15 (UNLICENSED) KIDDIE-TALKIES FROM SEPTEMBER 18 TO DECEMBER 31, 1978 TO ALLOW MARKETERS TO GET RID OF THEIR INVENTORIES OF THESE UNITS.

OUR CONGATULATIONS TO ALL RECENT HIGH SCHOOL AND COLLEGE GRADUATES AND A THOUGHT FOR US OLD TIMERS TO PONDER.

THEY ARE GOING TO SIT WHERE YOU ARE SITTING, AND WHEN YOU ARE GONE ATTEND TO THOSE THINGS WHICH YOU THINK ARE IMPORTANT. YOU MAY ADOPT ALL THE POLICIES YOU PLEASE; BUT HOW THEY ARE CARRIED OUT DEPENDS ON THEM. THEY WILL ASSUME CONTROL OF YOUR CITIES, STATES AND NATIONS. THEY ARE GOING TO MOVE IN AND TAKE OVER YOUR CHURCHES, SCHOOLS, UNIVERSITIES AND CORPORATIONS. ALL YOUR BOOKS ARE GOING TO BE JUDGED, PRAISED OR CONDEMNED BY THEM. THE FATE OF HUMANITY IS IN THEIR HANDS.

A 77-78 MEMBERSHIP LIST HAS BEEN PREPARED AND WILL BE MADE AVAILABLE TO ALL MEMBERS AT THE JUNE MEETING. MEMBERS NOT ATTENDING THE MEETING WILL BE MAILED THE LIST SOON.

TI IS ENTERING THE AMATEUR MARKET - FCC EXPERIMENTAL STATION LICENSE KI2-XHL HAS BEEN GRANTED TO TEXAS INSTRUMENTS OF LUBBOCK, TEXAS, FOR 220-225 MHZ R AND D WORK ON A NEW TRANSCIEVER FOR USE IN THE AMATEUR RADIO SERVICE.

MICROWAVES ASSOCIATES GUNNPLEXERS WILL NOT BE SUPPLIED TUNED ABOVE 10.4 GHZ DESPITE MANY RECENT REQUESTS THE COMPANY HAS HAD FOR UNITS TUNED TO 10.5. MA IS SELLING THE DEVICES STRICTLY FOR LEGITIMATE AMATEUR USE, AND FEELS THAT MOST, IF NOT ALL, REQUESTS FOR THEM TUNED IMMEDIATELY ADJACENT TO THE POLICE RADAR BAND ARE BY WOULD-BE RADAR JAMMERS.

FCC IS ENFORCING ITS MARKETING BAN ON LINEARS. AT LEAST ONE LARGE DEALER HAS BEEN SHUT DOWN AND A CONSIDERABLE STOCK OF ILLEGAL AMPLIFIERS SEIZED, AND A NUMBER OF LESS FLAGRANT VIOLATORS ARE RECEIVING STRONGLY WORDED "CEASE AND DESIST" LETTERS.

EX-NOVICES WHOSE LICENSES EXPIRED LESS THAN A YEAR AGO WILL BE ELIGIBLE TO APPLY FOR REINSTATEMENT JUST LIKE ANY OTHER AMATEUR LICENSEES UNDER FCC'S RECENT RULES MAKING NOVICE LICENSES GOOD FOR FIVE YEARS AND RENEWABLE. THIS MEANS ANY FORMER NOVICE WHOSE LICENSE EXPIRED AFTER MAY 15, 1977 CAN SUBMIT A FORM 610 ON OR AFTER MAY 15, BUT WITHIN ONE YEAR OF HIS ORIGINAL EXPIRATION DATE, WHEN THE NEW PROVISIONS BECOME EFFECTIVE, AND REGAIN HIS LICENSE FOR A FULL FIVE YEARS, WITHOUT TAKING AN EXAM. PRESENT NOVICE LICENSE HOLDERS MUST REALIZE THE NEW FIVE YEAR NOVICE LICENSE TERMS ARE NOT RETROACTIVE, THEIR LICENSE STILL EXPIRED IN TWO YEARS ON THE EXPIRATION DATE THEY BEAR AND MUST BE RENEWED WITH FORM 610. (HRR)

HYGAIN IS BACK IN BUSINESS, SHIPPING ANTENNAS FROM INVENTORY AND EXPECTING TO BE IN FULL PRODUCTION BY JUNE 1. (HRR)

INELIGIBLE AMATEURS ARE STILL REQUESTING SPECIAL CALLSIGNS AND CAUSING DELAYS IN PROCESSING PROPER APPLICATIONS BY TYING UP GETTYSBURG PERSONNEL. A NUMBER OF CLUB AND MILITARY RECREATION STATIONS (FROZEN) AND REPEATER APPLICATIONS ARE ALSO COMING IN. (HRR)

AMATEUR RADIO'S RANKS GREW OVER 11 PER CENT IN THE PAST YEAR, ACCORDING TO JUST RELEASED FIGURES FROM THE FCC. AT THE END OF APRIL, U.S. AMATEUR OPERATORS LICENSES NUMBERED 337,959 COMPARED TO ONLY 304,331 A YEAR AGO. BIGGEST GROWTH WAS IN THE NOVICE CLASS, UP 12,434 FROM LAST YEAR TO TOTAL 58,016. EXTRA CLASS SHOWED THE NEXT GREATEST PERCENTAGE INCREASE, UP MORE THAN 20 PER CENT TO 19,797, BUT EVERY CLASS SHOWED HEALTHY GROWTH RATES OF 6 PER CENT OR MORE. TOTAL STATION LICENSES AT THE END OF APRIL WERE 350,597, WHICH INCLUDES CLUBS, RACES (DOWN DRAMATICALLY FROM 276 A YEAR AGO TO ONLY 33 NOW), MILITARY RECREATION, INDIVIDUAL SECONDARY AND OF COURSE REPEATERS. (HRR)

REGENCY HAS CLOSED OUT ITS AMATEUR RADIO PRODUCTS LINE AND, AT LEAST FOR NOW, IS UNCERTAIN AS TO WHEN OR IF IT WILL RE-ENTER THE HAM MARKET. HEAVY SALES VOLUME IN MARINE AND OTHER PRODUCTS PROMPTED THE DECISION. (HRR)

HEATH'S POPULAR SB-220 LINEAR IS NOW COMPLETELY SOLD OUT AND NO MORE WILL BE PRODUCED PER THE FCC'S BAN ON LINEARS COVERING 10 METERS. A NEW MODEL WITHOUT 10 METERS WILL BE OUT IN THE FALL. (HRR)

## SUNSPOT CYCLE 21—THE PEAK, HOW MUCH, AND WHEN

By O. Okleshen W9RX (Propagation Editor HR Report)

Of the many methods and authors of the "how much and when" of a solar cycle maximum, the most recent and likely the most accurate method has been devised by A. I. Ohl, a Soviet scientist whose first publication was reported in Solnechnaya Dannyye, #9 pp 73-75. H. H. Sargent III, Space Environment Services Center, Boulder, Colorado, modified the Ohl theory thus enhancing the accuracy of the basic method developed by Ohl. The theory is based on the Regression Of Recurrent Geomagnetic Activity Recorded From The Prior Cycle To Predict The Sunspot Maximum Of The Forthcoming Cycle.

Mr. Sargent modified the Ohl theory by taking into account finer time resolution and more accurate data than was available to Ohl. The Ohl theory, as modified, provided accuracies of maximum sunspot cycle peaks when tested against observed data within an accuracy of 1% in some cases. While not so in every case, accuracies within 5% of maximum sunspot level predictions appear to be common. Compared to any prior known methods, the Ohl/Sargent method would be, by far, a major breakthrough in the prediction of sunspot cycle maximum levels, when accuracy and other advantages are considered. The data used to establish and test the original Ohl theory was extracted from the last 110 years. The data before 1848 is dubious because of the information and techniques available. For that reason, some of the other theories used at that time to predict sunspot maximum levels may be erroneous.

Many other methods have been used to achieve individual and combined success to determine maximum sunspot peak levels. The IGY peak of 1957 led to anticipation of a peak level, certainly of a magnitude that would stimulate IGY research. One often used method is a "slope" technique that observes the rate of upward change at the beginning of a new cycle. This observed rate of change is then projected to a peak value. The Ohl method has two most important advantages over all other theories and methods of establishing the sunspot peak level. First, it appears to be superbly accurate, and second and probably most important, the Ohl method gives a year's earlier lead time. It is only necessary to use data from the prior decaying cycle.

The exact mechanism between the prior cycle recurrent geomagnetic behavior and the succeeding cycle sunspot maximum is not clear. However it is likely that one is directly related to the other in solar physics whereby it is even possible that a new definition of a solar cycle may have to be established. Conjecture may place some possible validity in the theory that coronal holes that relate to recurrent geomagnetic disturbances may be the birthplaces for the succeeding cycle sunspot regions. This aspect of course would have to be studied and proved.

This special report contains material from W9RX and extractions from a paper composed by H.H. Sargent III, Space Environment Services Center, Boulder, Colorado. Mr. Sargent will be presenting his paper "A Prediction for the Next Solar Cycle" March 24th to the IEEE Vehicular Technology Group Conference in Denver.

There is no doubt that the Ohl/Sargent method has great potential, as those needing accurate sunspot predictions are and have always been confronted with widely ranging opinions. We know that cycle 21 predicted maximums of 50 to 60 have already been exceeded; the February 1978 smoothed sunspot level has already reached at least 90 with the cycle peak approximately two years into the future!

As for specific figures of what may be in store for amateur radio, the following highlights and numbers have been extracted from the work of Mr. Sargent.

Predicted Smooth Sunspot Maximum For Cycle 21 By Ohl/Sargent....153.6

Approximate Arrival Date Of The Maximum.....early 1980

Prediction Of Smooth Sunspot Level Maximum By Method Of Ratios..158.0  
(This method takes the averaged smoothed odd cycle peaks divided by the averaged smoothed even cycle peaks times the peak of cycle 20)

Accuracy Of The Ohl/Sargent Method As Tested With Observed Data From Cycle 20 And Compared To Cycle 20 Sunspot Peak Level..nearly 95%

Twelve Hour Periods With Geomagnetic "A" Indices Of 100 Or More Expected In The Next Ten Years.....81  
(an "A" index of over 50 indicates a major geomagnetic storm)

Monthly Smoothed Predicted Sunspot Numbers  
Using The Modified Ohl Method For Cycle 21

Jan 78-----58.6	Jan 79-----110.8	Jan 80-----151.5	Jan 81-----139.0
Feb 78-----64.4	Feb 79-----114.6	Feb 80-----153.4	Feb 81-----135.8
Mar 78-----69.6	Mar 79-----116.8	Mar 80-----151.4	Mar 81-----133.7
Apr 78-----75.0	Apr 79-----120.3	Apr 80-----152.0	Apr 81-----134.8
May 78-----80.6	May 79-----124.5	May 80-----153.6	May 81-----127.8
Jun 78-----85.1	Jun 79-----127.8	Jun 80-----152.2	Jun 81-----126.2
Jul 78-----89.5	Jul 79-----131.1	Jul 80-----150.9	Jul 81-----126.2
Aug 78-----93.6	Aug 79-----136.1	Aug 80-----149.8	Aug 81-----125.6
Sep 78-----97.6	Sep 79-----138.2	Sep 80-----146.2	Sep 81-----123.4
Oct 78-----99.7	Oct 79-----140.8	Oct 80-----145.4	Oct 81-----122.3
Nov 78-----103.3	Nov 80-----145.0	Nov 80-----143.7	Nov 81-----121.2
Dec 78-----107.1	Dec 80-----148.1	Dec 80-----141.2	Dec 81-----120.6

It is clear that if the predictions hold true, cycle 21 will be a whopper and will likely parallel cycle 18 and have an impact almost as severe as cycle 19. During periods of high solar activity, many services will be detrimentally affected. Satellite damage from solar radiation is one example. Communications and power will be interrupted. VLF Omega navigation alert used on overseas aircraft would likely be affected rendering the service at times, next to useless. Worse may be the impossibility of warning users that the system is failing. Space travel and related health hazards will become a significant factor to take into account. Magnetometer survey work for natural resources will be affected to such an extent that at times, the investigations would have to be curtailed with a severe cost impact on such resources even before production. CB radio on HF will likely be sheer havoc with skip interference. And now there is new evidence to support the fact that the weather is directly affected by solar sunspot behavior and geomagnetic occurrences previously thought to be unrelated.

HR Report feels that the amateur community should be made aware of a highly accurate prediction that may well not only affect our use of the radio spectrum, but likely our daily lives and our destiny.

W9RX

\*\*\*SWAP AND SHOP\*\*\*

FOR SALE-- A TA 33SR. TRIBANDER MOSLEY BEAM AND A HAM-M ROTATOR WITH ALL CONTROLS. \$90.00 EACH ITEM. CONTACT K1CVH GEORGE LABARRE, SOUTHBORO OR MAC WA1IGL AT 877-2717.

FOR SALE-- A HALICRAFTER SX101A RECIEVER IN MINT CONDITION. SPECIAL CONSIDERATION ON THE PRICE WILL BE GIVEN TO NOVICES, OR TO PERSONS WISHING TO JOIN THE AMATEUR RANKS. A GOOD NEW HOME FOR THE EQUIPMENT TO HELP SOMEONE STARTING OUT IS JIM'S PARAMOUNT DESIRE. ALSO FOR SALE IS A HEATH 32A 20 METER SINGLEBANDER WITH AN AC SUPPLY INCLUDED, THIS EQUIPMENT IS ALSO IN MINT CONDITION.

WANTED-- A 2 METER YAGI WITH 8 OR 11 ELEMENTS, PLEASE CONTACT JIM ROBBINS N1JR AT 653-3884. FOR ANY OF THESE ITEMS.

\*\*\*\*SOCIAL EVENTS\*\*\*\*

JULY 8-9--NOBARC FLEA MARKET AND HAMFEST AT THE CUMMINGTON FAIRGROUNDS, CUMMINGTON, MASS. ON ROUTE 9--THIS WILL BE AN ALL DAY AFFAIR AND GET TOGETHER. SOUNDS LIKE A NICE FAMILY CUTING.

CREDIT FOR PASSING THE CW EXAM CAN NOW BE RETAINED BY AN FCC LICENSE APPLICANT EVEN THOUGH HE FAILED THE WRITTEN TEST. IN A DECISION REACHED LATELY, THE COMMISSIONERS AGREED TO ALLOW AN APPLICANT SUCH CREDIT UP TO ONE YEAR AFTER HE TAKES THE EXAM. TO RECIEVE CW CREDIT THE APPLICANT WILL BE GIVEN AN FCC FORM 845 BY THE FIELD OFFICE AT THE TIME OF THE EXAM. HE TURNS IT IN WHEN HE RETURNS FOR ANOTHER TRY AND RECIEVES CREDIT FOR THE CW PORTION OF THE EXAM. FORM 845 WILL BE HONORED ONLY BY THE FIELD OFFICE THAT ISSUED IT. THE FORMS AND INSTRUCTIONS FOR THEIR USE HAVE GONE TO ALL FCC FIELD OFFICES. AND THE RULES CHANGE BECOMES EFFECTIVE IMMEDIATELY, HOWEVER, TO BE ON THE SAFE SIDE, IT WOULD BE WISE TO CHECK WITH YOUR LOCAL FIELD OFFICE TO SEE IF THEY'VE IMPLEMENTED THE NEW PROCEEDURE BEFORE GOING IN FOR AN EXAM. (HRR)

FCC'S REVIEW OF PETITIONS FOR RECONSIDEREATION OF ITS BAN ON AMATEUR 10 METER LINEARS IS ON THE COMMISSIONS AGENDA FOR JUNE 15TH. THERE APPEARS TO BE LITTLE HOPE OF ANY DRASTIC RETREAT FROM THE POSITION THE COMMISSIONERS TOOK IN THEIR ORIGINAL REPORT AND ORDER ON DOCKET 21116 BACK IN FEBRUARY, HOWEVER. (HRR)

FCC'S BAN ON AMATEUR RECIEVERS THAT HAVE AN 11 METER BAND WAS SOMEWHAT RELAXED BY A WAIVER GRANTED BY THE COMMISSIONERS ON JUNE 9TH. THE BAN, WHICH RESULTED FROM FCC'S CUTOFF SALE OF 23 CHANNEL CBs AND OLDER CB RECIEVERS, WAS LIFTED ONLY FOR THOSE AMATEUR RECIEVERS MANUFACTURED BEFORE 1960. OTHER AMATEUR EQUIPMENT WITH AN 11 METER BAND, SUCH AS SOME JAPANESE MADE TRANSCIEVERS, ARE STILL BANNED FROM SALE UNDER THE RULES. (HRR)

AN AMATEUR-LIKE REPEATER FOR NON-AMATEURS IS OFFERED BY A NEW GROUP FORMED TO UTILIZE CLASS A (460 MHZ) CB. THE MAUMEE EMERGENCY RADIO ASSOCIATION HAS ONE AUTOPATCH REPEATER GOING IN THE BAND, AND MERA PRESIDENT WB9VKO PLANS TO SET UP ADDITIONAL CLASS A REPEATERS IN NEARBY STATES. (HRR)

AN OO'S ROLE WHEN AMATEUR VIOLATIONS ARE OBSERVED IS TO HELP OFFENDING STATION CORRECT HIS PROBLEMS BEFORE THEY COME TO THE FCC'S ATTENTION, AND TAKING SUCH PROBLEMS TO THE FCC OFFICES SHOULD BE RESERVED FOR NON-AMATEUR INTERLOPERS OR AS AN EXTREME LAST RESORT WHEN VIOLATIONS ARE WILLFUL AND CONTINUING. W1NJM (ARRL)

CONFUSION SAY: DAUGHTER HAS HER MASTERS-SON HIS PHD-BUT DADS THE ONLY ONE WHO HAS A JOB.... .